



Standard Practice for Platforms in Cargo Tanks¹

This standard is issued under the fixed designation F 1385; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice provides design, construction, and installation criteria for platforms in cargo tanks.

1.2 Where platforms are attached to ladders see ~~Fig. 1, Fig. 2, Fig. 3, and Fig. 4.~~ Figs. 1-4.

1.3 The values stated in SI (metric) units are to be regarded as the standard. The inch-pound units given in parentheses are for information only.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

¹ This practice is under the jurisdiction of ASTM Committee F-25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.03 on Outfitting. Current edition approved ~~March 15, 1992; Nov. 10, 2001.~~ Published September 1992; January 2002. Originally published as F 1385 - 92. Last previous edition F 1385 - 92.

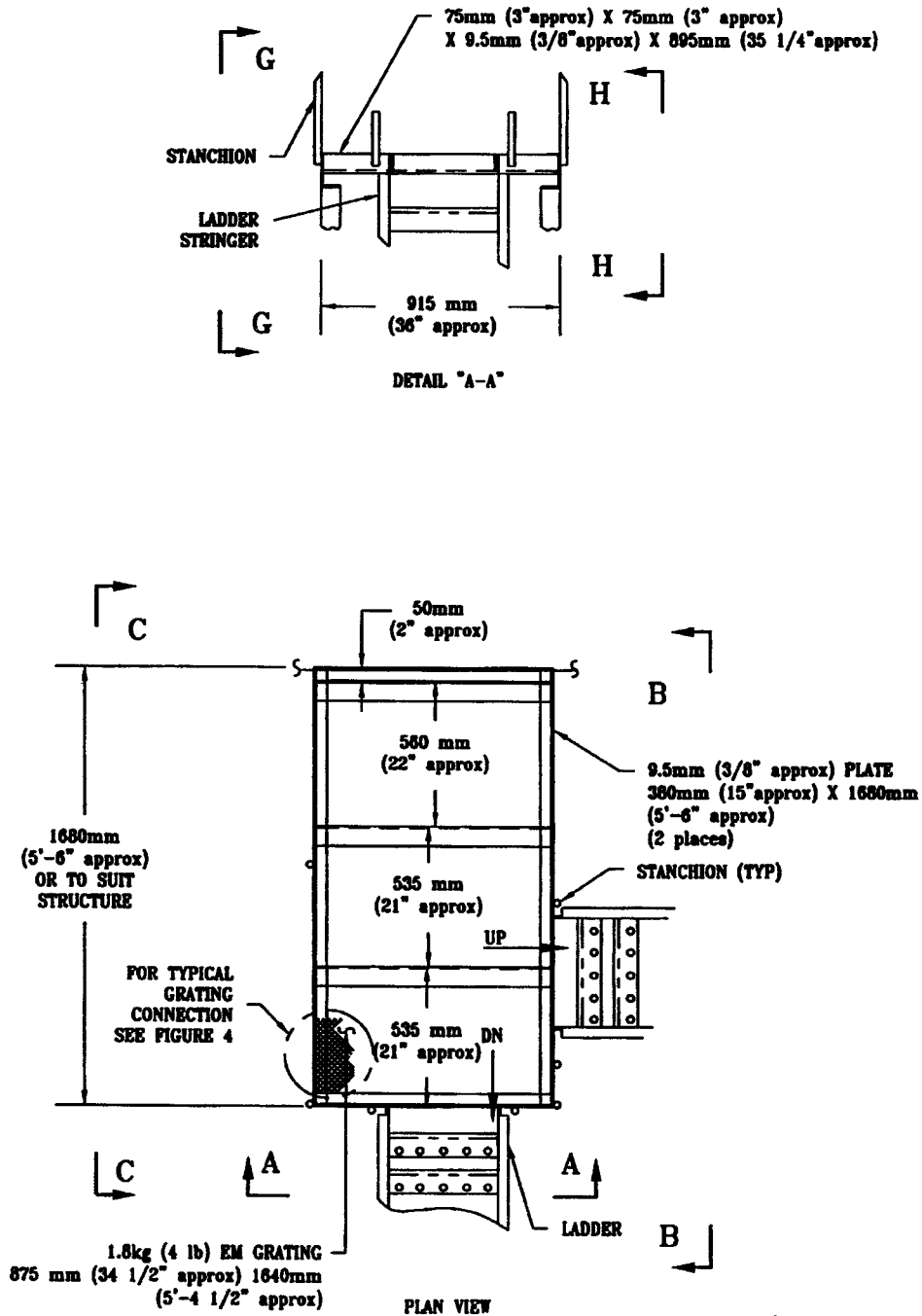


FIG. 1 Cargo Platform—Bulkhead

A 36/A 36M Specification for Carbon Structural Steel²

2.2 Military Specifications:

MIL-C-277258 Coatings, Corrosion Preventive, for Aircraft Integral Fuel Tanks³ Specification:

MIL-G-18015 Grating, Metal, Other than Bar Type (Shipboard Use)³

² Annual Book of ASTM Standards, Vol 01.04.

³ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS; Naval Sea Systems Command, SEA 03R42, 2531 Jefferson Davis Highway, Arlington, VA 22242-5160.

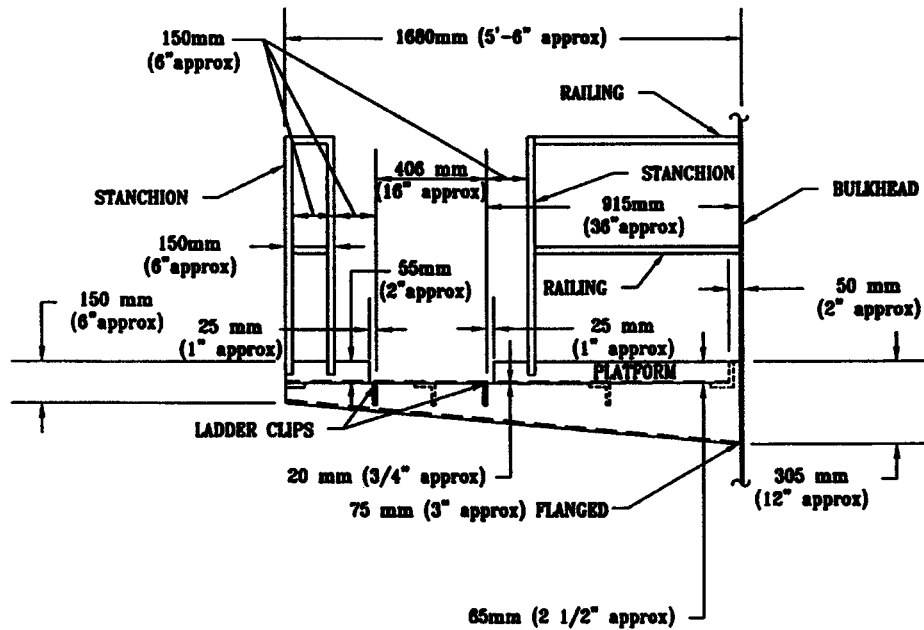
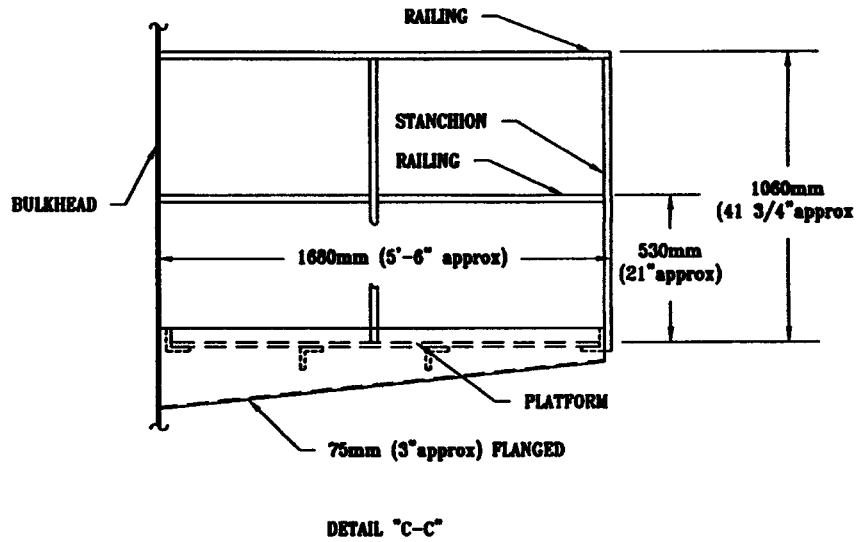


FIG. 2 Cargo Platform Elevation

2.3 Federal Standard:

FED-SPEC-RR-C-271 Chain and Attachments, Welded and Weldless⁴

2.4 ABS Standard:

American Bureau of Shipping Rules for Building and Classing Steel Vessels^{4,6}

2.45 AWS Standard:

AWS D1.1 Structural Welding Code—Steel⁷

2.6 Other Standards:

⁴ Available from American Bureau of Shipping, ABS Plaza, 16855 Northchase Dr., Houston, TX 77060; Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

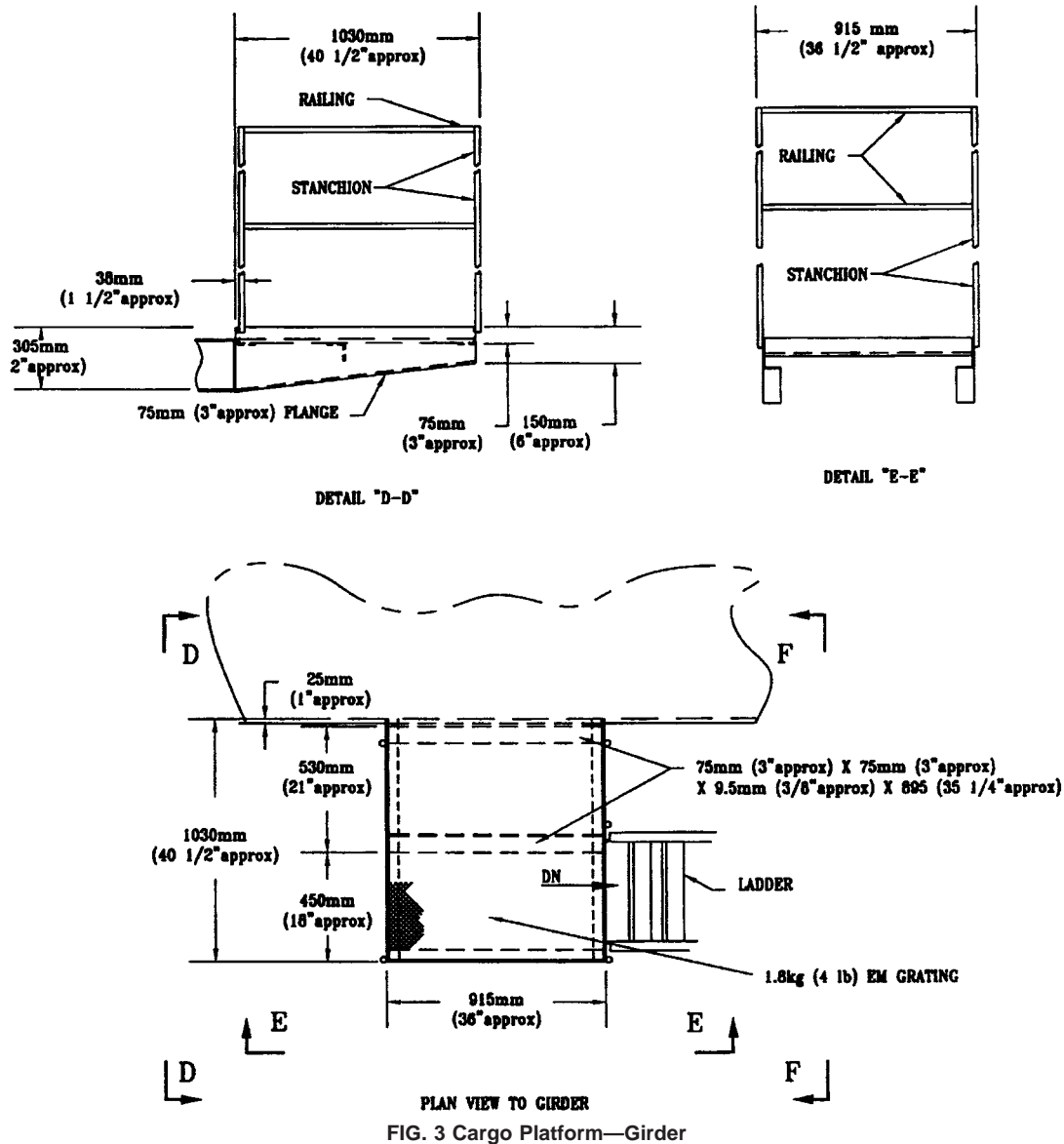


FIG. 3 Cargo Platform—Girder

SAE-AMS-C-27725 Coatings, Corrosion Preventative, Polyurethane, for Aircraft Integral Fuel Tanks for Use to 250 Degrees F (121 Degrees C)³

3. Significance and Use

3.1 This practice establishes the procedure for the construction and installation of platforms to be fabricated and installed by the shipyards within the cargo tanks.

4. Materials and Manufacture

4.1 Materials:

4.1.1 *Gratings*—1.8-kg (4-lb) expanded metal fabricated in accordance with MIL-G-18015.

4.1.2 *Flanged Plate Supports*—Fabricated from 10 by 380 mm (approximately 3/8 by 15 in.) with a 75-mm (approximately 3-in.) flange of carbon steel plate in accordance with Specification A 36/A 36M.

4.1.3 *Angle Supports*—75- by 75- by 10-mm (approximately 3- by 3- by 3/8-in.) structural angles of carbon steel in accordance with Specification A 36/A 36M.

4.1.4 *Stanchions*—25-mm (approximately 1-in.) diameter carbon steel.

⁶ Available from American Welding Society, 550 N.W. LeJeune Rd., Miami, FL 33126. Bureau of Shipping, ABS Plaza, 16855 Northchase Dr., Houston, TX 77060.

⁷ Available from Steel Structures Painting Council (SSPC), 4400 Fifth Ave., Pittsburgh, PA 15213; American Welding Society, 550 N.W. LeJeune Rd., Miami, FL 33126.

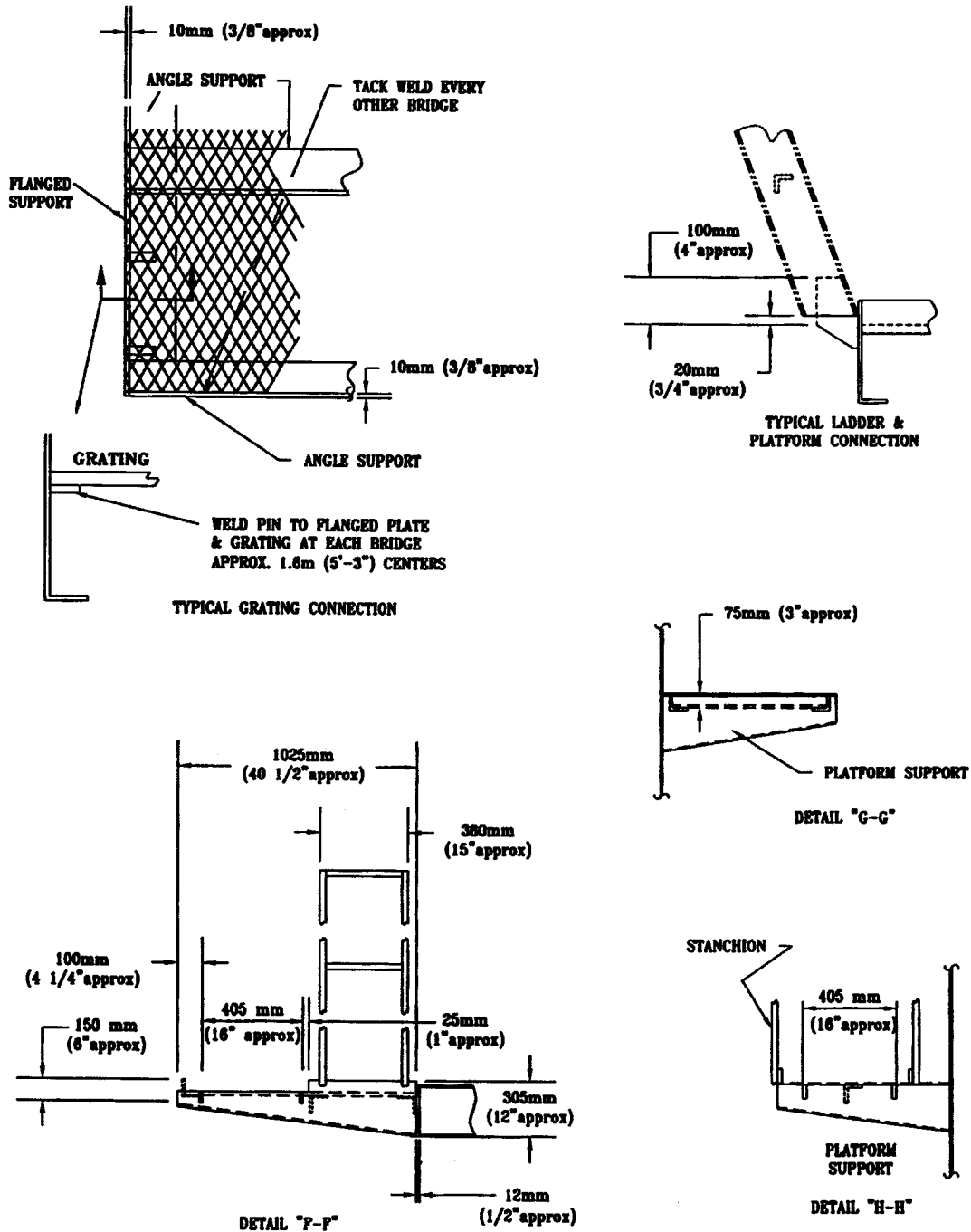


FIG. 4 Cargo Platforms Showing Typical Sections

4.2 *Manufacture:*

4.2.1 Platforms shall be constructed as shown in Figs. 1-4.

4.2.2 The dimensions indicated in Figs. 1-4 are for the commonly used sizes. However, dimensions can be modified to suit other existing structures.

4.2.3 Platforms shall be designed to support static loads of at least 1380 14 kPa (approximately 2 300 psif).

4.2.4 Platforms shall be locally reinforced where greater loads are contemplated for removal or disassembly of machinery.

4.2.5 All welding shall be in accordance with American Bureau of Shipping Rules for Building and Classing Steel Vessels or AWS D1.1.

4.2.6 Tolerances shall be ±6 mm (approximately 1/4 in.).

5. **Dimensions**

5.1 Openings in railings serving ladders to lower levels shall not be more than 690 mm (approximately 27 in.) wide.

5.2 Safety chains with snap hooks shall be provided to close such openings at heights of 530 and 1060 mm (approximately 21 and 42 in.) above the walking surface. Chain shall be welded and shall be in accordance with FED-SPEC-RR-C-271.

6. Workmanship, Finish, and Appearance

56.1 Platforms shall be free of all sharp edges, burrs, projections, weld splatter, and other defects that might be injurious to personnel or equipment, or both.

56.2 For cargo tanks carrying cargo other than fuel oils, coat platforms with one coat 3.0-MIL dry film thickness inorganic zinc silicate following surface preparation in accordance with the Steel Structure Painting Council Specifications⁸ or the manufacturer's paint instructions.

56.3 For spaces carrying fuel oil cargo, one coat of 3.0-MIL dry film thickness of corrosion preventive coating shall be applied to the platforms in accordance with SAE-AMHS-C-27725.

6.4 Grating sections are to be tested in accordance with MIL-G-18015 or as follows: Support a section of grating on two supports each 25 mm (approximately 1 in.) wide and 915 mm (approximately 36 in.) apart. The test load is to be three times the design load. The test load is to be suspended from a bar 610 by 50 mm (approximately 24 by 2 in.) applied across the grating midway between the supports.

7. Keywords

7.1 cargo tank access; cargo tank gratings; cargo tank platforms; cargo tanks; platforms

⁸ Available from Steel Structures Painting Council (SSPC), 40 24th St., 6th Floor, Pittsburgh, PA 15222-4656.

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